

# Comparisons of Job Characteristics

Focus Occupation: **Environmental Engineers (17-2081)**

Associated Occupation: **Hydrologists (19-2043)**

[Compare Knowledge](#)

[Compare Skills](#)

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[Compare Detailed Work Activities](#)

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<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 81

Focus Occupation: Environmental Engineers (17-2081)

Associated Occupation: Hydrologists (19-2043)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	9.2	17.7	16.3	0	Current knowledge level may be sufficient
Engineering and Technology	5.7	17.4	21.7	>>	Current knowledge level is likely more than sufficient
Geography	3.9	16.7	8.3	<<	Extensive education and/or training may be required
Physics	4.3	15.7	15.7	0	Current knowledge level may be sufficient
Chemistry	4.8	15.6	15.8	0	Current knowledge level may be sufficient
Biology	3.7	13.6	10.0	<<	Extensive education and/or training may be required
Design	5.2	12.6	17.2	>>	Current knowledge level is likely more than sufficient
Law and Government	5.9	11.3	13.6	>	Current knowledge level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 88

Focus Occupation: Environmental Engineers (17-2081)

Associated Occupation: Hydrologists (19-2043)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Critical Thinking	10.8	14.5	14.5	0	Current skill level may be sufficient
Science	4.5	13.0	11.4	<	A higher skill level may be required
Mathematics	6.2	12.8	12.3	0	Current skill level may be sufficient
Programming	2.2	6.5	5.6	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 97			
Focus Occupation: Environmental Engineers (17-2081) Associated Occupation: Hydrologists (19-2043)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Inductive Reasoning	10.2	14.6	15.4	0	Current ability level may be sufficient
Written Comprehension	11.0	14.6	16.0	0	Current ability level may be sufficient
Written Expression	9.8	14.1	13.9	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	17.0	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	13.8	13.4	0	Current ability level may be sufficient
Deductive Reasoning	10.6	13.4	16.2	>	Current ability level is likely sufficient
Flexibility of Closure	7.8	12.0	13.5	>	Current ability level is likely sufficient
Originality	7.6	11.5	10.1	<	Some improvement in abilities may be required
Fluency of Ideas	7.6	11.3	12.2	0	Current ability level may be sufficient
Category Flexibility	9.0	11.2	13.6	>	Current ability level is likely sufficient
Number Facility	6.3	10.8	11.7	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 81
Focus Occupation: Environmental Engineers (17-2081) Associated Occupation: Hydrologists (19-2043)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Advise clients or customers	19	
Advise governmental or industrial personnel	28	
Analyze ecosystem data	69	
Analyze scientific research data or investigative findings	27	
Collect scientific or technical data	30	
Communicate technical information	4	
Confer with scientists	54	
Develop or maintain databases	30	
Develop plans for programs or projects	31	
Develop policies, procedures, methods, or standards	21	
Develop tables depicting data	33	
Direct and coordinate scientific research or investigative studies	27	

Explain complex mathematical information	30
Interpret aerial photographs	69
Plan scientific research or investigative studies	48
Prepare environmental impact or related environmental reports	81
Prepare reports	8
Prepare technical reports or related documentation	22
Read maps	42
Resolve engineering or science problems	46
Use building or land use regulations	65
Use computers to enter, access or retrieve data	3
Use knowledge of investigation techniques	16
Use library or online Internet research techniques	21
Use mathematical or statistical methods to identify or analyze problems	30
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 77

**Focus Occupation: Environmental Engineers (17-2081)**  
**Associated Occupation: Hydrologists (19-2043)**

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Chemical evaluation instruments and supplies	10
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Electrochemical measuring instruments and accessories	9
Hydrological instruments	31
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory ovens and accessories	15
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Network applications software	1

Pumps	9
Sampling equipment	12
Seismological instruments	56
Soil measuring equipment	20
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.